Hoopa Valley Tribal Council

Land Management Division
Tribal Environmental Protection Agency
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This notice announces request for proposals (RFP) from qualified engineers and consultants in the field of alternative energy development. Specifically this RFP is for consultants who can assess, analyze and quantify data and information relative to Hydro-power development on the Hoopa Valley Indian Reservation. In FY2006, the Hoopa Valley Tribe received a grant from the U.S. Department of Energy to assess the feasibility of developing Hydro-power from seven tributaries that flow into the Trinity River. This project is being coordinated by the Hoopa Tribal EPA (TEPA). TEPA has already assessed potential sites within the Reservation that are suitable for Hydro-power development. TEPA has also incorporated stream flows, stream gradient, stage levels and rain fall into a data base used to quantify water resources available for Hydro-power development. This RFP seeks consultants who can utilize this information to model the most appropriate Hydro-power systems for the selected sites including water intake structures, pipelines, turbines, generators and the appropriate pluming and electrical hardware needed to develop the onsite utilities for selected streams. The selected consultant will also quantify the annual electric power potential for each site based on the available water resources and stream source management plan. Additional assessments relative to developing a Tribal utility are also required as they relate to cost benefit analysis, options for sale of electricity, utility maintenance and employment.

The following is a description of the project objectives which represent the requirements for consultants as they relate to fulfilling this RFP.

Objectives for this project:

1. Review turbine technology and generator capabilities

2. Conducting a technology analysis by determining which type of hydro-power turbine is appropriate according to a specific location, stream flows, stream gradient, and flow management.

3. Drafting a preliminary design model of a small scale hydro system by reviewing site data to determine appropriate generator size and turbine technology (Pelton Kaplan, Francis). Deriving power outputs and approximate cost of the generating system will provide the basic equation of whether or not there will be enough revenue to support any particular system and debt payments.

4. Develop cost estimates for hydro power generating systems including piping, power house construction, turbine and generator, interconnection equipment, cement, access roads, power lines and substation construction to determine initial viability of potential projects

5. Assess the electric power potential and availability for commercial and residential users on tribal land and for export to the utility grid. Determine gross revenue generated that potentially could be marketed with Pacific Gas and Electric

6. Assess potential for power purchase agreements with PG&E by ascertaining size and type of generating facility with regard to proximity to transmission lines, making sure acceptable interconnection equipment and standards are met.

7. Assess the transmission and interconnection needs by determining the size and voltage of a potential generating facility, appropriate sub-station, switchgear and safety interconnects that are required by the utility. This will include a review of the length and difficulty of installation of the power lines that will need to be constructed. Identify necessary agreements that will need to be executed with the local utility (PG& E).

8. Assess the economic and financial feasibility of the project by using a cost/benefit analysis from the perspectives of an owner. If benefits outweigh the costs, a decision for development will be made.

9. Assess the potential long term competitive power costs by reviewing what the current and anticipated price for power from the utility, and comparing this with the generation, use and cost of power on Hoopa Tribal Lands.

10. Conduct an economic analysis by weighing the benefits from any particular installation versus the costs of that installation, including other indirect costs to the Tribe such as ongoing environmental monitoring costs and maintenance of the facility, substation and transmission lines.

11. Assess increased revenue to the Tribe by:
    1. Sale of electric energy
    2. Commercial development, and subsidized power for Tribal Businesses and or Residences
    3. Increased skills and employability by Tribal Members

12. Assess the potential increase of employment base by:

    1. Construction employment by encouraging contractors to utilize local labor sources, and hiring Hoopa contractors

    2. Operation and maintenance employment once staff and management needs are determined by the number, type and complexity of the installations.

The results of this assessment will be compiled into a final report covering all potential sites. The final report and any accompanying data will be submitted in electronic form to the Tribal EPA as a fulfillment of the contract.

Submit proposals and bids by October 5th, 2007

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